



## **MULTI-FUNCTIONAL ANTIBODIES**

### **CROSS-REFERENCES TO RELATED APPLICATIONS**

[0001] This application is a continuation-in-part of U.S. Patent Application  
5 No. \_\_\_\_\_, filed July 22, 2003 (Attorney Docket No. 02307O-130910US, Multi-  
Functional Antibodies) which is a continuation-in-part U.S. Patent Application No.  
10/350555, filed January 23, 2003, the disclosures of which are herein incorporated by  
reference in their entirety for all purposes.

### **STATEMENT AS TO RIGHTS TO INVENTIONS MADE UNDER FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT**

[0002] This invention was made with Government support under Grant No. CA16861,  
awarded by the NIH/NCI to C. F. Meares. The Government has certain rights in this  
invention.

### **BACKGROUND OF THE INVENTION**

[0003] Over a million new cases of cancer will be diagnosed this year in the United States.  
While surgery can often provide definitive treatment of cancer in its early stages, the  
eradication of metastases is crucial to the cure of more advanced disease. Chemotherapeutic  
20 drugs are used in combinations for this purpose, with considerable success. Nonetheless,  
over half a million Americans will die from cancer this year. Progressions and relapses  
following surgery and chemotherapy/radiation are not uncommon, and in most cases the  
second line of treatment is of limited use. Despite the expenditure of large amounts of public  
and private resources over many years, better treatments for cancer are sorely needed.

25 [0004] Currently there are approximately 100 antineoplastic drugs on the market. Their  
systemic use is associated with undesirable side effects including toxicity to normal cells,  
which limits the doses used for treatment of the disease. Most pharmaceuticals consist of  
small organic molecules, which effectively traverse cell membranes and become widely  
distributed through the body. As reviewed by Langer, polymer-based pharmaceutical agents  
30 provide a variety of new approaches to safer and better therapies (*see*, Langer R, *Nature*, 392  
(6679) SUPPS: 5-10 (1998)). Polymers and other macromolecules do not traverse  
membranes; however, they may be selectively accumulated in the interstitial space of a



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23070-130920US

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APPL NO.	FILING OR 371 (c) DATE	ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	DRAWINGS	TOT CLMS	IND CLMS
10/631,258	07/31/2003	1645	638	023070-130920US	35	42	3

CONFIRMATION NO. 1595

## UPDATED FILING RECEIPT



\*OC000000014174316\*

20350  
 TOWNSEND AND TOWNSEND AND CREW, LLP  
 TWO EMBARCADERO CENTER  
 EIGHTH FLOOR  
 SAN FRANCISCO, CA 94111-3834

Date Mailed: 10/22/2004

Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).**

## Applicant(s)

Claude F. Meares, Davis, CA;  
 Todd M. Corneillie, Davis, CA;

## Assignment For Published Patent Application

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA, Oakland, CA

**Power of Attorney:** The patent practitioners associated with Customer Number 043850.

## Domestic Priority data as claimed by applicant

This application is a CIP of Appln. No. 10/625,047, 7/22/03

**Foreign Applications** which is a CIP of Appln. No. 10/350,555 1/23/03

**If Required, Foreign Filing License Granted:** 11/06/2003

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US10/631,258**

**Projected Publication Date:** 02/03/2005

**Non-Publication Request:** No

**Early Publication Request:** No

JLE

**\*\* SMALL ENTITY \*\*****Title**

Multi-functional antibodies

**Preliminary Class**

435

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**LICENSE FOR FOREIGN FILING UNDER  
Title 35, United States Code, Section 184  
Title 37, Code of Federal Regulations, 5.11 & 5.15**

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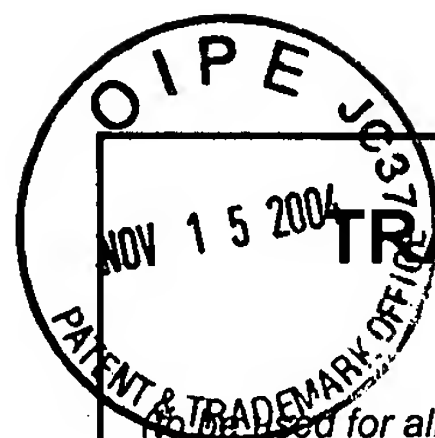
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# TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

		Application Number	10/631,258
		Filing Date	July 31, 2003
		First Named Inventor	Meares, Claude F.
		Art Unit	1645
		Examiner Name	Not Yet Assigned
Total Number of Pages in This Submission		Attorney Docket Number	61818-5015-US02 (023070-130920US)

## ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request (See Remarks) <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input checked="" type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <ul style="list-style-type: none"> <li>• Return postcard</li> <li>• Supplemental ADS</li> <li>• Copy of: Utility Transmittal (filed 7/31/03)</li> <li>• Copy of ADS filed 7/31/03</li> <li>• Copy of page 1 of spec. filed 7/31/03</li> <li>• Copy of page 1 of sequence list filed 1/7/04</li> <li>• Copy of marked-up filing receipt</li> </ul>
Remarks: The Commissioner is authorized to charge any additional fees to Deposit Account 50-0310.		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Morgan, Lewis & Bockius LLP Jeffry S. Mann	Reg. No. 42,837
Signature		
Date	November 9, 2004	

## CERTIFICATE OF TRANSMISSION/MAILING

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Signature		Date	November 9, 2004

**UTILITY  
PATENT APPLICATION  
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 023070-130920US

First Inventor

Meares, Claude F.

Title

MULTI-FUNCTIONAL ANTIBODIES

Express Mail Label No.

EV 330852420 US

**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning design patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☒ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 84 ]  
(preferred arrangement set forth below)
  - Descriptive title of the Invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 35 ]
5. Oath or Declaration [Total Pages ]
  - a. ☐ Newly executed (original or copy)
  - b. ☐ Copy from a prior application (37 CFR 1.63 (d))  
(for a continuation/divisional with Box 18 completed)
    - i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☒ Application Data Sheet. See 37 CFR 1.76

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7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a. ☐ Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i. ☐ CD-ROM or CD-R (2 copies); or
    - ii. ☐ paper number of pages
  - c. ☐ Statements verifying identity of above copies

**ACCOMPANYING APPLICATIONS PARTS**

9. ☐ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney  
(when there is an assignee)
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent
17. ☐ Other:

18. If a **CONTINUING APPLICATION**, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP)

of prior application No 023070-130910US filed 07/22/03

Prior application information: Examiner \_\_\_\_\_

Art Unit: \_\_\_\_\_

For **CONTINUATION** or **DIVISIONAL APPS** only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.**19. CORRESPONDENCE ADDRESS**☒ Customer Number

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48,631

Signature

Date

July 31, 2003

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